

ABSTRACT

Certain non-nucleoside compounds that will selectively inhibit telomerase by targeting the nucleic acid structures, such as G-quadruplexes, that may be associated with human telomeres or telomerase have been identified. Inhibition of human telomerase by two perylenetetracarboxylic acid diimides and a carbocyanine has been demonstrated. ¹H-NMR studies have evidenced the stabilization of a G-quadruplex by the perylenetetracarboxylic acid diimide compounds and provided evidence that these and structurally related compounds inhibit the telomerase enzyme by a mechanism consistent with interaction with G-quadruplex structures.

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